CLAIMS

1. A thermo-expansive microcapsule comprising: a polymeric shell produced by polymerizing monomer components containing 15 to 75 weight % of a nitrile monomer, 10 to 65 weight % of a monomer having a carboxyl group, 0.1 to 20 weight % of a monomer having an amide group and 0.1 to 20 weight % of a monomer having a cyclic structure in its side chain; and a blowing agent encapsulated in the polymeric shell.

2. The thermo-expansive microcapsule of Claim 1, wherein the polymeric shell is produced by polymerizing the monomer components further containing 3 weight % or less of a monomer having at least two polymerizable double bonds (a cross-linking agent).

3. The thermo-expansive microcapsule of Claims 1 and 2, wherein the polymeric shell has a glass transition point (Tg) of 120 °C or higher.

4. The thermo-expansive microcapsule of Claims 1, 2 and 3, wherein the polymeric shell contains 1 to 25 weight % of inorganic compounds.

5. The thermo-expansive microcapsule of Claims 1, 2, 3 and 4, which has a maximum expanding temperature of 200 °C or higher.

6. A production process of a foamed and molded product which comprises adding the thermo-expansive microcapsule of Claim 1, 2, 3, 4 or 5 in rubber or resin to form a mixture and heating the mixture to expand the thermo-expansive microcapsule to introduce discrete air bubbles in the product.

7. A foamed and molded product containing the thermo-expansive microcapsule of Claim 1, 2, 3, 4 or 5.